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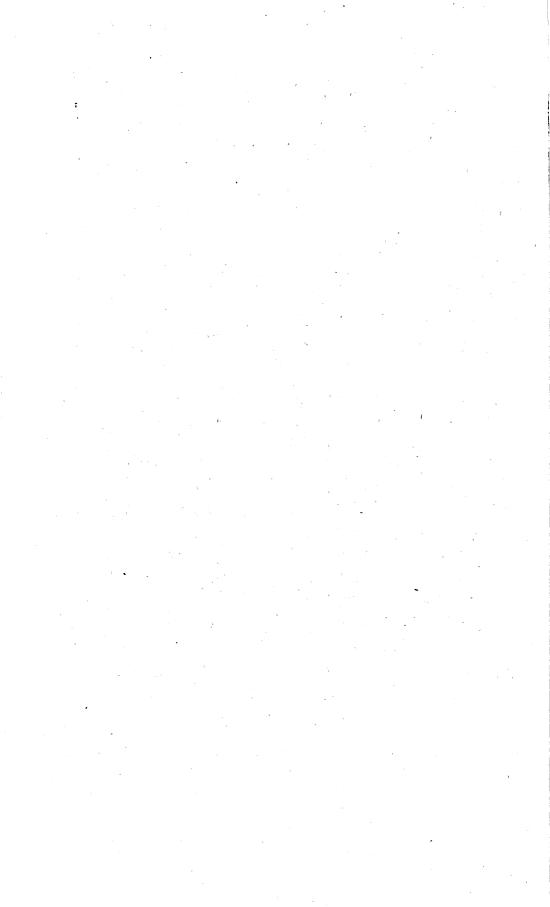
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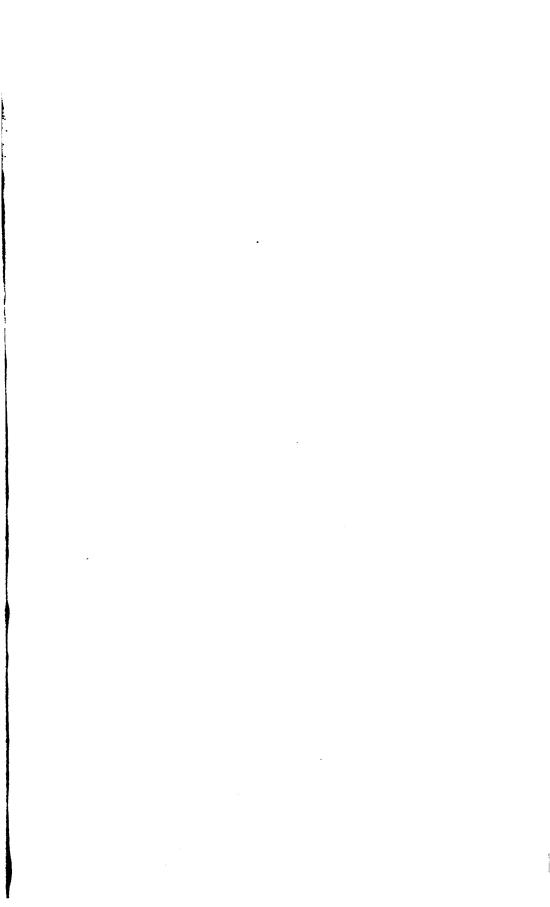
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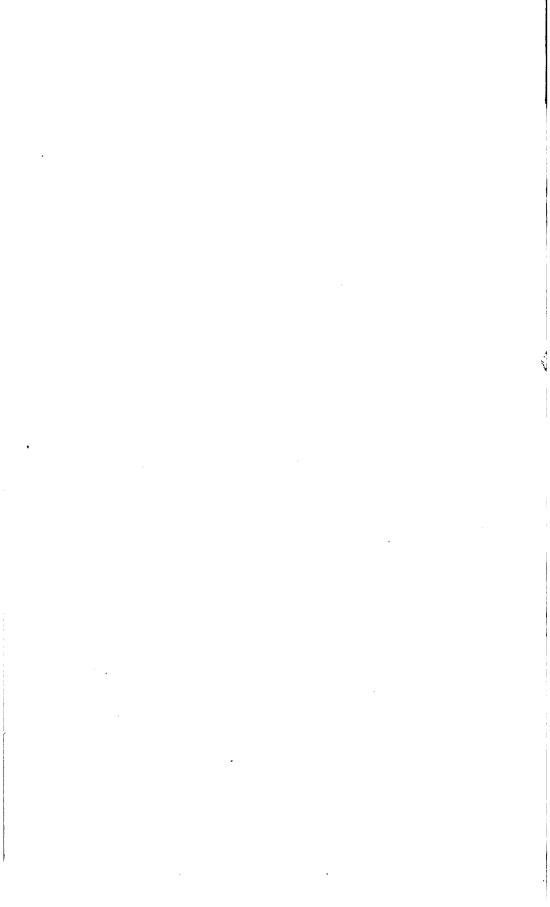
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October 24, 1899







U. S. DEPARTMENT OF AGRICULTURE. DIVISION OF ENTOMOLOGY.

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BIBLIOGRAPHY

OF

THE MORE IMPORTANT CONTRIBUTIONS

TO

AMERICAN ECONOMIC ENTOMOLOGY.

PREPARED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE

BY

SAMUEL HENSHAW.

PART V.

THE MORE IMPORTANT WRITINGS

O¥.

GOVERNMENT AND STATE ENTOMOLOGISTS,

AND OF

OTHER CONTRIBUTORS TO THE LITERATURE OF AMERICAN ECONOMIC ENTOMOLOGY.

T.-7

WASHINGTON:

GOVERNMENT PRINTING OFFICE.

1896.

4

FORTY-SEVENTH CONGRESS, FIRST SESSION.

Congress of the United States, In the House of Representatives,

June 24, 1882.

Resolved, By the House of Representatives (the Senate concurring), that there be printed, for the use of the Department of Agriculture, one thousand copies of a special report entitled "Bibliography of Economic Entomology."

Attest:

EDW. McPherson, Clerk.

Passed the Senate July 6, 1882.

F. E. SHOBER, Acting Secretary.

A true copy.

EDW. McPherson, Clerk.

2

LETTER OF TRANSMITTAL.

UNITED STATES DEPARTMENT OF AGRICULTURE, DIVISION OF ENTOMOLOGY, Washington, D. C., October 15, 1896.

SIR: In transmitting for publication the final part of the Bibliography of the More Important Contributions to American Economic Entomology, the first part of which was published in 1890, it seems necessary, in view of certain public claims by Mr. B. Pickman Mann as to the authorship of the bibliography, to make a further statement for the information of those who may be interested in the question.

It became the writer's duty in 1889 to transmit for publication Parts I, II, and III, during the prolonged absence of the chief of the division. Mr. Henshaw's name appeared on the title page of these parts, as well as subsequent parts, as the author, and to this Mr. Mann has taken exception, as well as to the statement made by the writer in his original letter of transmittal, to the effect that the manuscript which he had prepared "was turned over in an incomplete and fragmentary condition" to Mr. Henshaw, who had "added greatly to it and practically rewritten portions already prepared." Subsequent investigation has convinced the writer that in this statement he did not give Mr. Mann sufficient credit, and this omission is hereby publicly acknowledged.

Nevertheless, the claims which Mr. Mann has made can not be reconciled with statements by Mr. Henshaw as to the condition of the manuscript when received by him and the difficulty in reconciliation is indicated by the following statement from Mr. Mann and introductory note from Mr. Henshaw:

MR. MANN'S STATEMENT.

This work was in its original conception modeled upon the bibliographical record of "Psyche," under my editorship, and I was employed in the preparation of it during my six years' connection with the Department of Agriculture. I completed more than five-eighths of the material, except the indexes, composing the first volume, mainly in Part III, and left this, at the time of the severance of my connection with the Division of Entomology, December 31, 1886, in condition for publication as prepared, together with about 5,000 titles of other articles, the latter largely without analytic notes, for the subsequent parts, and an estimated number of more than 18,000 index references to the same.

Of the titles prepared for the parts subsequent to Part III I find only the more important to have been published.

B. PICKMAN MANN.

MR. HENSHAW'S INTRODUCTORY NOTE.

The publication of the final part of this bibliography renders an acknowledgment of the assistance received desirable.

Messrs. A. J. Cook, C. H. Fernald, S. A. Forbes, L. O. Howard, H. Osborn, F. M. Webster, and C. M. Weed kindly furnished data concerning their several publications, and the printed lists of Messrs. As Fitch, Townend Glover, T. W. Harris, William Le Baron, and J. A. Lintner have been freely used. The work of Messrs. A. S. Packard and J. S. Kingsley in the first stages of the bibliography should also be mentioned, and I especially desire to add an explicit recognition of the work of Mr. B. P. Mann.

Though an exact agreement between Mr. Mann and myself does not seem possible, I most willingly acknowledge that his work, especially in Part III, was both extensive and important. The original plan of the bibliography, like the bibliographical record published in "Psyche," was conceived by Mr. Mann, and during his connection with the Division of Entomology, from September 1, 1881, to December 31, 1886, he completed several thousand titles, besides amassing a large amount of miscellaneous data. I supplemented Mr. Mann's work with additional material and rewrote reviewed, and, when possible, condensed the analytic notes of the parts prepared by Mr. Mann; introduced a uniform nomenclature of the scientific names, made the several indexes wholly anew, and read the proof.

SAMUEL HENSHAW.

CAMBRIDGE, October 12, 1896.

By mutual consent of Messrs. Mann and Henshaw the evidence upon which these two notes are based has been submitted to Dr. Theodore N. Gill, as an unprejudiced arbiter of the question as to the true authorship of the volumes. Dr. Gill decided, in a letter to the Assistant Secretary of Agriculture, dated April 20, 1896, "that the credit for the work and right to appear on the title page as editor properly belong to Mr. Henshaw."

The present part completes the work which can be done under the authority of the joint resolution of Congress dated July 6, 1882. It brings the Bibliography of American Economic Entomology down to June 30, 1888.

Efforts will be made to bring the bibliography down to date and to publish thereafter occasional supplements.

Respectfully,

L. O. HOWARD, Entomologist.

Hon. J. STERLING MORTON,

Secretary of Agriculture.

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¹Dr. LeBaron was born at North Andover, Mass., 17 October, 1814, and died at Elgin, Ill., 14 October, 1876. See Ent. Amer., October, 1885, v. 1, pp. 122–125.

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- 1045. SAUNDERS, W. On some of our common insects. 16. The gooseberry sawfly (*Nematus ventricosus* Klug). <Can. Ent., June, 1874, v. 6, pp. 101-104, figs. 16-19.
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Characters of several North American species; the habits and transformations of the group.

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^{*} Born at Kingsport, Tenn., 27 July, 1825.

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Cossus centerensis, 244. robinim, 733, 792, 895, 1184, 1337. sp., 207, 662. Cotalpa lanigera, 541, 542, 543, 842, 846, 900, 1074, 1483. Cotton army worm, 908. belt, 1192. insects, 846, 1126, 1144. moth, 635, 1657. pest, 492. seed, 692.	insects, 49, 512, 569, 846, 900, 1086, 1108. measuring worm, 1046. sawfly, 351, 426, 837. stem borer, 1524. worm, 83, 131, 480, 565, 591, 1014, 1016, 1018, 1021, 1240, 1472, 1529. parasite, 457. Cutworm moth, 271. Cutworms, 58, 68, 362, 404, 412, 431, 561, 678, 724, 846, 1080, 1123, 1124, 1245, 1288, 1321, 1586,
Cossus centerensis, 244. robinis, 733, 792, 895, 1184, 1337. sp., 207, 662. Cotalpa lanigera, 541, 542, 543, 842, 846, 900, 1074, 1483. Cotton army worm, 908. belt, 1192. insects, 846, 1126, 1144. moth, 635, 1657. pest, 492. seed, 692. spiders on, 582.	Insects, 49, 512, 569, 846, 900, 1086, 1108. measuring worm, 1046. sawfly, 351, 426, 837. stem borer, 1524. worm, 83, 131, 480, 565, 591, 1014, 1016, 1018, 1021, 1240, 1472, 1529. parasite, 457. Cutworm moth, 271. Cutworms, 58, 68, 362, 404, 412, 431, 561, 678, 724, 846, 1080, 1123, 1124, 1245, 1288, 1321, 1586, 1562, 1608.
Cossus centerensis, 244. robiniæ, 733, 792, 895, 1184, 1337. sp., 207, 662. Cotalpa lanigera, 541, 542, 543, 842, 846, 900, 1074, 1483. Cotton army worm, 908. belt, 1192. insects, 846, 1126, 1144. moth, 635, 1657. pest, 492. seed, 692. spiders on, 582. wood beetle, 561, 1294, 1474, 1500, 1589.	insects, 49, 512, 569, 846, 900, 1086, 1108. measuring worm, 1046. sawfly, 351, 426, 837. stem borer, 1524. worm, 83, 131, 480, 565, 591, 1014, 1016, 1018, 1021, 1240, 1472, 1529. parasite, 457. Cutworm moth, 271. Cutworms, 58, 68, 362, 404, 412, 431, 561, 678, 724, 846, 1080, 1123, 1124, 1245, 1288, 1321, 1536, 1562, 1608. apple, 501.
Cossus centerensis, 244. robiniæ, 733, 792, 895, 1184, 1337. sp., 207, 662. Cotalpa lanigera, 541, 542, 543, 842, 846, 900, 1074, 1483. Cotton army worm, 908. belt, 1192. insects, 846, 1126, 1144. moth, 635, 1657. pest, 492. seed, 692. spiders on, 582. wood beetle, 561, 1294, 1474, 1500, 1539. insects, 97, 859.	insects, 49, 512, 569, 846, 900, 1086, 1108. measuring worm, 1046. sawfly, 351, 426, 837. stem borer, 1524. worm, 83, 131, 480, 565, 591, 1014, 1016, 1018, 1021, 1240, 1472, 1529. parasite, 457. Cutworm moth, 271. Cutworms, 58, 68, 362, 404, 412, 431, 561, 678, 724, 846, 1080, 1123, 1124, 1245, 1288, 1321, 1586, 1562, 1608. apple, 501. bronze colored, 761.
Cossus centerensis, 244. robiniæ, 733, 792, 895, 1184, 1337. sp., 207, 662. Cotalpa lanigera, 541, 542, 543, 842, 846, 900, 1074, 1483. Cotton army worm, 908. belt, 1192. insects, 846, 1126, 1144. moth, 635, 1657. pest, 492. seed, 692. spiders on, 582. wood beetle, 561, 1294, 1474, 1500, 1539. insects, 97, 859. worm, 3, 623, 654, 657, 909, 911, 987, 988, 1126,	Insects, 49, 512, 569, 846, 900, 1086, 1108. measuring worm, 1046. sawfly, 351, 426, 837. stem borer, 1524. worm, 83, 131, 480, 565, 591, 1014, 1016, 1018, 1021, 1240, 1472, 1529. parasite, 457. Cutworm moth, 271. Cutworms, 58, 68, 362, 404, 412, 431, 561, 678, 724, 846, 1080, 1123, 1124, 1245, 1288, 1321, 1586, 1562, 1608. apple, 501. bronze colored, 761. corn, 147, 380. Cuterebra buccata, 955.
Cossus centerensis, 244. robinim, 733, 792, 895, 1184, 1337. sp., 207, 662. Cotalpa lanigera, 541, 542, 543, 842, 846, 900, 1074, 1483. Cotton army worm, 908. belt, 1192. insects, 846, 1126, 1144. moth, 635, 1657. pest, 492. seed, 692. spiders on, 582. wood beetle, 561, 1294, 1474, 1500, 1539. insects, 97, 859. worm, 3, 623, 654, 657, 909, 911, 987, 988, 1126, 1151, 1206, 1225, 1226, 1227, 1229,	Insects, 49, 512, 569, 846, 900, 1086, 1108. measuring worm, 1046. sawfly, 351, 426, 837. stem borer, 1524. worm, 83, 131, 480, 565, 591, 1014, 1016, 1018, 1021, 1240, 1472, 1529. parasite, 457. Cutworm moth, 271. Cutworms, 58, 68, 362, 404, 412, 431, 561, 678, 724, 846, 1080, 1123, 1124, 1245, 1288, 1321, 1586, 1562, 1608. apple, 501. bronze colored, 761. corn, 147, 380. Cuterebra buccata, 955. Cylas formicarius, 469, 615.
Cossus centerensis, 244. robinim, 733, 792, 895, 1184, 1337. sp., 207, 662. Cotalpa lanigera, 541, 542, 543, 842, 846, 900, 1074, 1483. Cotton army worm, 908. belt, 1192. insects, 846, 1126, 1144. moth, 635, 1657. pest, 492. seed, 692. spiders on, 582. wood beetle, 561, 1294, 1474, 1500, 1539. insects, 97, 859. worm, 3, 623, 654, 657, 909, 911, 987, 988, 1126, 1151, 1206, 1225, 1226, 1227, 1229, 1230, 1236, 1237, 1238, 1360, 1373,	Insects, 49, 512, 569, 846, 900, 1086, 1108. measuring worm, 1046. sawfly, 351, 426, 837. stem borer, 1524. worm, 83, 131, 480, 565, 591, 1014, 1016, 1018, 1021, 1240, 1472, 1529. parasite, 457. Cutworm moth, 271. Cutworms, 58, 68, 362, 404, 412, 431, 561, 678, 724, 846, 1080, 1123, 1124, 1245, 1288, 1321, 1536, 1562, 1608. apple, 501. bronze colored, 761. corn, 147, 380. Cuterebra buccata, 955. Cylas formicarius, 469, 615. Cyllene picta, 318, 940, 984, 1002.
Cossus centerensis, 244. robiniæ, 733, 792, 895, 1184, 1337. sp., 207, 662. Cotalpa lanigera, 541, 542, 543, 842, 846, 900, 1074, 1483. Cotton army worm, 908. belt, 1192. insects, 846, 1126, 1144. moth, 635, 1657. pest, 492. seed, 692. spiders on, 582. wood beetle, 561, 1294, 1474, 1500, 1539. insects, 97, 859. worm, 3, 623, 654, 657, 909, 911, 987, 988, 1126, 1151, 1206, 1225, 1226, 1227, 1229, 1230, 1236, 1237, 1238, 1360, 1373, 1647, 1654, 1679. road dust vs., 1234.	insects, 49, 512, 569, 846, 900, 1086, 1108. measuring worm, 1046. sawfly, 351, 426, 837. stem borer, 1524. worm, 83, 131, 480, 565, 591, 1014, 1016, 1018, 1021, 1240, 1472, 1529. parasite, 457. Cutworm moth, 271. Cutworms, 58, 68, 362, 404, 412, 431, 561, 678, 724, 846, 1562, 1608. apple, 501. bronze colored, 761. corn, 147, 380. Cuterebra buccata, 955. Cylas formicarius, 469, 615. Cyllene picta, 318, 940, 984, 1002. robiniæ, 895, 940, 984, 1002, 1184.
Cossus centerensis, 244. robiniæ, 733, 792, 895, 1184, 1337. sp., 207, 662. Cotalpa lanigera, 541, 542, 543, 842, 846, 900, 1074, 1483. Cotton army worm, 908. belt, 1192. insects, 846, 1126, 1144. moth, 635, 1657. pest, 492. seed, 692. spiders on, 582. wood beetle, 561, 1294, 1474, 1500, 1589. insects, 97, 859. worm, 3, 623, 654, 657, 909, 911, 987, 988, 1126, 1151, 1206, 1225, 1226, 1227, 1229, 1230, 1230, 1237, 1238, 1360, 1373, 1647, 1654, 1679. road dust vs., 1234. Crabronidæ, habits of, 88.	insects, 49, 512, 569, 846, 900, 1086, 1108. measuring worm, 1046. sawfly, 351, 426, 837. stem borer, 1524. worm, 83, 131, 480, 565, 591, 1014, 1016, 1018, 1021, 1240, 1472, 1529. parasite, 457. Cutworm moth, 271. Cutworms, 58, 68, 362, 404, 412, 431, 561, 678, 724, 846, 1080, 1123, 1124, 1245, 1288, 1321, 1586, 1562, 1608. apple, 501. bronze colored, 761. corn, 147, 380. Cuterebra buccata, 955. Cylas formicarius, 469, 615. Cyllene picta, 318, 940, 984, 1002. roblinise, 895, 940, 984, 1002. roblinise, 895, 940, 984, 1002. Cynips seminator = Andricus seminator.
Cossus centerensis, 244. robinim, 733, 792, 895, 1184, 1337. sp., 207, 662. Cotalpa lanigera, 541, 542, 543, 842, 846, 900, 1074, 1483. Cotton army worm, 908. belt, 1192. insects, 846, 1126, 1144. moth, 635, 1657. pest, 492. seed, 692. spiders on, 582. wood beetle, 561, 1294, 1474, 1500, 1539. insects, 97, 859. worm, 3, 623, 654, 657, 909, 911, 987, 988, 1126, 1151, 1206, 1225, 1226, 1227, 1229, 1230, 1236, 1237, 1238, 1360, 1373, 1647, 1654, 1679. road dust vs., 1234. Crabronidæ, babits of, 88. Crambidæ, 295.	insects, 49, 512, 569, 846, 900, 1086, 1108. measuring worm, 1046. sawfly, 351, 426, 837. stem borer, 1524. worm, 83, 131, 480, 565, 591, 1014, 1016, 1018, 1021, 1240, 1472, 1529. parasite, 457. Cutworm moth, 271. Cutworms, 58, 68, 362, 404, 412, 431, 561, 678, 724, 846, 1080, 1123, 1124, 1245, 1288, 1321, 1586, 1562, 1608. apple, 501. bronze colored, 761. corn, 147, 380. Cuterebra buccata, 955. Cylas formicarius, 469, 615. Cyllene picta, 318, 940, 984, 1002. robiniæ, 895, 940, 984, 1002. robiniæ, 895, 940, 984, 1002. spongifica = Amphibolips q, spongifica.
Cossus centerensis, 244. robinim, 733, 792, 895, 1184, 1337. sp., 207, 662. Cotalpa lanigera, 541, 542, 543, 842, 846, 900, 1074, 1483. Cotton army worm, 908. belt, 1192. insects, 846, 1126, 1144. moth, 635, 1657. pest, 492. seed, 692. spiders on, 582. wood beetle, 561, 1294, 1474, 1500, 1539. insects, 97, 859. worm, 3, 623, 654, 657, 909, 911, 987, 988, 1126, 1151, 1206, 1225, 1226, 1227, 1229, 1230, 1236, 1237, 1238, 1360, 1373, 1647, 1654, 1679. road dust vs., 1234. Crabronidæ, babits of, 88. Crambidæ, 295. Crambus exsiccatus, 295, 370.	insects, 49, 512, 569, 846, 900, 1086, 1108. measuring worm, 1046. sawfly, 351, 426, 837. stem borer, 1524. worm, 83, 131, 480, 565, 591, 1014, 1016, 1018, 1021, 1240, 1472, 1529. parasite, 457. Cutworm moth, 271. Cutworms, 58, 68, 362, 404, 412, 431, 561, 678, 724, 846, 1080, 1123, 1124, 1245, 1288, 1321, 1586, 1562, 1608. apple, 501. bronze colored, 761. corn, 147, 380. Cuterebra buccata, 955. Cylas formicarius, 469, 615. Cyllene picta, 318, 940, 984, 1002. roblniae, 385, 940, 984, 1002. roblniae, 385, 940, 984, 1002. spongifica = Amphibolips q. spongifica. Cypress gall, 1222.
Cossus centerensis, 244. robiniæ, 733, 792, 895, 1184, 1337. sp., 207, 662. Cotalpa lanigera, 541, 542, 543, 842, 846, 900, 1074, 1483. Cotton army worm, 908. belt, 1192. insects, 846, 1126, 1144. moth, 635, 1657. pest, 492. seed, 692. spiders on, 582. wood beetle, 561, 1294, 1474, 1500, 1539. insects, 97, 859. worm, 3, 623, 654, 657, 909, 911, 987, 988, 1126, 1151, 1206, 1225, 1226, 1227, 1229, 1230, 1236, 1237, 1238, 1360, 1373, 1647, 1654, 1679. road dust vs., 1234. Crabronidæ, babita of, 88. Crambidæ, 295. Crambus exsiccatus, 295, 370. sp., 1408.	insects, 49, 512, 569, 846, 900, 1086, 1108. measuring worm, 1046. sawfly, 351, 426, 837. stem borer, 1524. worm, 83, 131, 480, 565, 591, 1014, 1016, 1018, 1021, 1240, 1472, 1529. parasite, 457. Cutworm moth, 271. Cutworms, 58, 68, 362, 404, 412, 431, 561, 678, 724, 846, 1080, 1123, 1124, 1245, 1288, 1321, 1536, 1562, 1608. apple, 501. bronze colored, 761. corn, 147, 380. Cuterebra buccata, 955. Cylas formicarius, 469, 615. Cyllene picta, 318, 940, 984, 1002. robiniae, 895, 940, 984, 1002, 1184. Cynips seminator = Andricus seminator. spongifica = Amphibolips q. spongifica. Cypress gall, 1222. insects, 859.
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Cossus centerensis, 244. robinim, 733, 792, 895, 1184, 1337. sp., 207, 662. Cotalpa lanigera, 541, 542, 543, 842, 846, 900, 1074, 1483. Cotton army worm, 908. belt, 1192. insects, 846, 1126, 1144. moth, 635, 1657. pest, 492. seed, 692. spiders on, 582. wood beetle. 561, 1294, 1474, 1500, 1539. insects, 97, 859. worm, 3, 623, 654, 657, 909, 911, 987, 988, 1126, 1151, 1206, 1225, 1226, 1227, 1229, 1230, 1236, 1237, 1238, 1360, 1373, 1647, 1654, 1679. road dust vs., 1234. Crabronidæ, babits of, 88. Crambidæ, 295. Crambus exsiccatus. 295, 370. sp., 1408. vulgivagellus, 290, 302, 303, 304, 341, 370, 1889. zeellus, 1420, 1584.	insects, 49, 512, 569, 846, 900, 1086, 1108. measuring worm, 1046. sawdy, 351, 426, 837. stem borer, 1524. worm, 83, 131, 480, 565, 591, 1014, 1016, 1018, 1021, 1240, 1472, 1529. parasite, 457. Cutworm moth, 271. Cutworms, 58, 68, 362, 404, 412, 431, 561, 678, 724, 846, 1080, 1123, 1124, 1245, 1288, 1321, 1586, 1562, 1608. apple, 501. bronze colored, 761. corn, 147, 380. Cuterebra buccata, 955. Cylas formicarius, 469, 615. Cyllene picta, 318, 940, 984, 1002. robiniæ, 895, 940, 984, 1002. robiniæ, 895, 940, 984, 1002. cynips seminator = Andricus seminator. spongifica = Amphibolips q. spongifica. Cypress gall, 1222. insects, 859. Dacne heros = Megalodacne heros. Dactylopius adonidum, 838. Dactylosphæra = Phylloxera.
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